

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**FOIL when  $A \neq 1$  solution (version 18)**

**FOIL the expressions shown below:**

1.  $(9x + 3)(9x - 9)$

$$\begin{aligned} & (9)(9)x^2 + (9)(-9)x + (3)(9)x + (3)(-9) \\ & (81)x^2 + (-81)x + (27)x + (-27) \\ & 81x^2 - 54x - 27 \end{aligned}$$

2.  $(2x - 6)(5x + 4)$

$$\begin{aligned} & (2)(5)x^2 + (2)(4)x + (-6)(5)x + (-6)(4) \\ & (10)x^2 + (8)x + (-30)x + (-24) \\ & 10x^2 - 22x - 24 \end{aligned}$$

3.  $(-9x + 6)(5x - 8)$

$$\begin{aligned} & (-9)(5)x^2 + (-9)(-8)x + (6)(5)x + (6)(-8) \\ & (-45)x^2 + (72)x + (30)x + (-48) \\ & -45x^2 + 102x - 48 \end{aligned}$$

4.  $(-4x + 5)(6x - 5)$

$$\begin{aligned} & (-4)(6)x^2 + (-4)(-5)x + (5)(6)x + (5)(-5) \\ & (-24)x^2 + (20)x + (30)x + (-25) \\ & -24x^2 + 50x - 25 \end{aligned}$$

5.  $(-9x + 2)(-3x + 3)$

$$\begin{aligned} & (-9)(-3)x^2 + (-9)(3)x + (2)(-3)x + (2)(3) \\ & (27)x^2 + (-27)x + (-6)x + (6) \\ & 27x^2 - 33x + 6 \end{aligned}$$

**FOIL the expressions shown below:**

6.  $(-6x - 9)(2x - 6)$

$$\begin{aligned} &(-6)(2)x^2 + (-6)(-6)x + (-9)(2)x + (-9)(-6) \\ &(-12)x^2 + (36)x + (-18)x + (54) \\ &-12x^2 + 18x + 54 \end{aligned}$$

7.  $(3x + 7)(-5x + 8)$

$$\begin{aligned} &(3)(-5)x^2 + (3)(8)x + (7)(-5)x + (7)(8) \\ &(-15)x^2 + (24)x + (-35)x + (56) \\ &-15x^2 - 11x + 56 \end{aligned}$$

8.  $(-5x + 2)(4x + 5)$

$$\begin{aligned} &(-5)(4)x^2 + (-5)(5)x + (2)(4)x + (2)(5) \\ &(-20)x^2 + (-25)x + (8)x + (10) \\ &-20x^2 - 17x + 10 \end{aligned}$$

9.  $(-6x - 2)(7x + 5)$

$$\begin{aligned} &(-6)(7)x^2 + (-6)(5)x + (-2)(7)x + (-2)(5) \\ &(-42)x^2 + (-30)x + (-14)x + (-10) \\ &-42x^2 - 44x - 10 \end{aligned}$$

10.  $(-4x + 6)(8x + 6)$

$$\begin{aligned} &(-4)(8)x^2 + (-4)(6)x + (6)(8)x + (6)(6) \\ &(-32)x^2 + (-24)x + (48)x + (36) \\ &-32x^2 + 24x + 36 \end{aligned}$$